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No. 1384/67

CENTRAL INTELLIGENCE AGENCY
Directorate of Intelligence
29 August 1967

INTELLIGENCE MEMORANDUM

Employment of the Walleye System
Against Targets in North Vietnam

Summary

The Walleye is a new air-to-surface missile first fired in North Vietnam in March 1967. It has been used against power plants, bridges, and barracks, and has a good record for accuracy. The damage caused by the weapon is generally limited, however, because it carries a relatively small explosive charge and only one is carried per aircraft.

Note: This memorandum was produced solely by CIA. It was prepared by the Office of Economic Research and the Office of Strategic Research and coordinated with the Office of Current Intelligence.

JCS and DIA
review(s)
completed.

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1. The Walleye is a self-guided unpowered glide bomb designed for use against large, semihard targets such as bridges, airfield and industrial facilities, and ships. It carries 450 pounds of high explosive and can be fuzed to detonate either on contact or after a small delay to allow it to penetrate a structure.

2. As the pilot of the launch aircraft approaches the target area, a television system in the missile enables the guidance system to lock on to the installation showing the highest contrast. When the display in the cockpit shows that the missile has acquired the proper target, the pilot releases the Walleye. Its guidance system takes over, homing in on the target with its TV system. Guidance is accomplished by movable surfaces on the missile's fins.

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4. At least 45 Walleye missiles have been employed against North Vietnamese targets, 26 of them against power plants, 11 against bridges, and 3 against barracks. All three missiles employed against barracks were hits and caused moderate damage to the structures. Available poststrike photography of strikes against five bridges suggests a high degree of accuracy against these targets. One bridge was destroyed, one seriously damaged, one apparently not damaged although struck by a missile, and damage to two could not be determined because of extensive damage by other ordnance. A plate of ten photographs is attached showing a bridge target before the strike, the launching and trajectory of the missile, and the impact and damage.

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5. The 26 Walleye missiles were employed against four thermal electric power plants as follows:

Plant	Date	Missiles Launched	Hits
Hanoi	19 May 67	4	0
	21 May 67	4	3
	10 Jun 67	3	0
	21 Aug 67	5	2
Bao Giang	20 May 67	3	Unknown
Uong Bi	26 May 67	4	Unknown
Ben Thuy	5 July 67	1	Unknown
	18 July 67	2	Unknown

Strikes against the Hanoi plant have employed the Walleye exclusively. Evaluation of the Walleye missions against the other three plants has not been possible either because of damage resulting from strikes using conventional ordnance.

6. Five of the 16 missiles used in the four strikes against the Hanoi plant were direct hits. All of the others are believed to have struck inside a radius of about 100-150 feet from the structure. Negligible damage resulted from the 19 May strike. The 21 May strike caused heavy damage to two of the total seven boilers and moderate damage to one boiler. The turbine hall was undamaged. The plant probably was operating at about one-third installed capacity within five days after the strike and operations were up to about one-half installed capacity within 30 days. The strike on 10 June apparently caused no additional damage. The plant was believed to be operating at no more than three-fourths of its installed capacity at the time of the 21 August 1967 strike.

7. The two missiles that hit on 21 August went through the roof and probably exploded inside the building. The holes in the roof appear to have been made by the missiles passing through. The missiles are timed to explode seconds after initial impact and the explosion inside the building would not necessarily be evident from the outside. If the missiles impacted and exploded as hypothesized, the plant probably will be totally out of service for only

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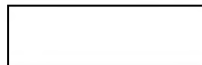
a few days, and within one week probably can be operated at roughly one-half the installed capacity of 32,500 kw. The degree of internal damage is speculative but probably is limited to severe damage to one generating unit, possible damage to a second generating unit, and possible damage to one adjacent boiler. It is estimated that at least four or five of the seven boilers are serviceable, and that at least three or four of the six turbine-generators are also serviceable.

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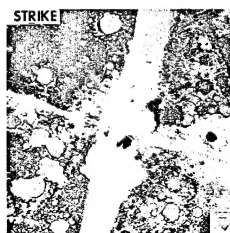
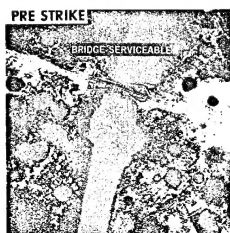
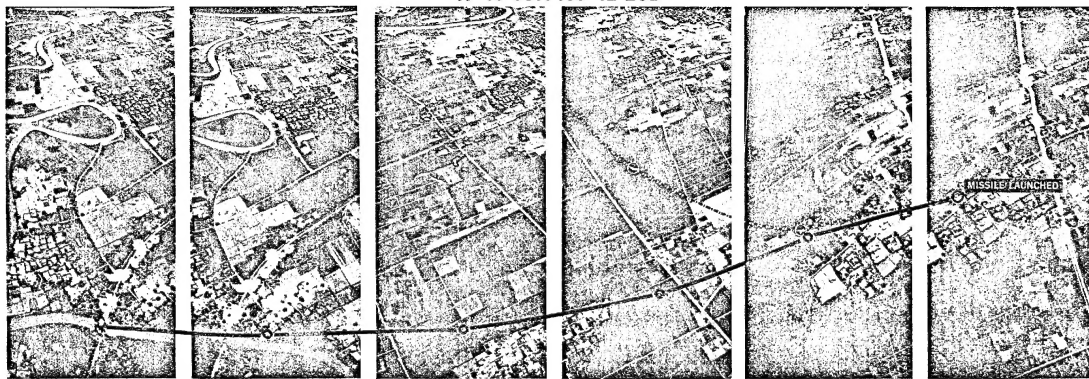
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NORTH VIETNAM
THINH LAC RR BRIDGE WEST
WALLEYE STRIKE
19 40 05N 105 42 26E



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